

QUARTERLY PERFORMANCE WITH RESPECT TO ENVIRONMENTAL ASPECTS

DURING QUARTER I (JUL-SEP'25)2025-26

Name of Enterprise : Numaligarh Refinery Limited

I. Fresh Water in Cubic Meter Per Tonne of Crude Processed

Table A-I	JUL	AUG	SEP	Cummulative JUL-SEP'25	Cumm. for the period APR'25-JUN'26
Crude Processed, MT	259146	248011	245708	752866	1552185
Fresh Water Consumed, M3	648103	627956	593577	1869636	3793956
Water Consumed, M3/MT of Crude Processed (Design capacity is 2.8 M3/MT of Crude Processed)	2.5	2.5	2.4	2.48	2.44

II. Liquid Effluent Quantity

Table A-II	JUL	AUG	SEP	Cummulative JUL-SEP'25	Cumm. for the period APR'25-JUN'26
Quantity of Effluent Discharged/loss, M3***	32682	41760	52415	126857	254277
Effluent Discharged/loss, M3/1000 MT of Crude Processed	126	168	213	168	164
Reuse, M3	53711	83495	79149	216355	420429
% Reuse/Recycled on Effluent Generated	52.42	66.66	60.16	60.22	60.09

III. Average Sulphur Dioxide Emission

Table A-III	APR	MAY	JUN	Cummulative JUL-SEP'25	Average for the period APR'25-JUN'26
SO2 Emission, Kg/Hr (SPCB Norms: 256 Kg/Hr as SO2)	62.18	59.42	57.37	59.7	62.58

Remarks

***Treated water discharge to outside environment directly from ETP via dedicated pipeline discontinued since 2006.
Presently there is no dedicated facility for discharging Treated effluent from ETP. The quantities provided are representation of the system/operational losses in ETP due to various constraints

QUARTERLY PERFORMANCE REPORT W.R.T ENVIRONMENTAL ASPECT
DURING QUARTER II (JUL-SEP'25)2025-26

TABLE-1 LIQUID EFFLUENT POLLUTANT LEVEL -								
MONITORED VALUES in mg/lit.except pH								
SL. NO	PARAMETERS	NO. OF OBS	MAX.	MIN.	AVG.	Limiting value for conc. (mg/l except for pH)	Quantum limit in Kg / 1000 MT of crude processed	
							Actual	Standard
1	pH	92	8.5	6.2	7.4	6-8.5	-	-
2	OIL & GREASE	92	5.0	0.5	1.52	5	0.72	2.0
3	SULPHIDE	92	<0.1	<0.1	<0.1	0.5	<0.1	0.2
4	PHENOL	92	0.22	0.02	0.05	0.35	0.02	0.14
5	S. SOLID	92	17.2	1.2	6.71	20.0	3.20	8.0
6	COD	92	123.0	8.20	36.7	125.0	17.50	50.0
7	BOD3	92	15.0	0.5	5.29	15.0	2.53	6.0
8	CN	92	<0.02	<0.02	<0.02	0.2	<0.02	0.08
9	Ammonia as N	3	10.8	10.8	10.80	15.0	5.15	6.0
10	Cr (Hexavalent)	3	0	0	0.00	0.1	0.0000	0.04
11	Cr (Total)	3	0	0	0.000	2.0	0.0000	0.8
12	Pb	3	0	0	0.0000	0.1	0.0000	0.04
13	Zn	3	0.028	0.028	0.028	5.0	0.0134	2.0
14	Ni	3	0.001	0.001	0.001	1.0	0.0005	0.4
15	Cu	3	0	0	0.000	1.0	0.0000	0.4
16	Benzene	3	<0.1	<0.1	<0.1	0.1	<0.1	0.04
17	Benzo (a)- Pyrene	3	<0.2	<0.2	<0.2	0.2	<0.2	0.08
18	Hg	3	<0.01	<0.01	<0.01	0.01	<0.01	0.004
19	V	3	<0.2	<0.2	<0.2	0.2	<0.2	0.8
20	TKN	3	19.27	9.26	12.60	40.0	6.01	16.0
21	P	3	1.23	0.67	0.86	3.0	0.41	1.2

Limiting concentration of effluent is as per MoEF notification on standard vide GSR-186 (E)dated 18th March, 2008.

* BDL- Detectable Limit : 0.1 microgram/Litre

* Parameters from 9 to 21 are monitored once in a month as per CPCB norms

QUARTERLY PERFORMANCE REPORT W.R.T ENVIRONMENTAL ASPECT.

DURING QUARTER II (JUL-SEP'25)2025-26

Online Stack Analyser data

UNIT	FURNACE STACK	PARAMETER	OBSERVED VALUE in mg/Nm3			Limiting Concentration in mg/Nm3	Remarks
			MAX.	MIN.	AVG		
CDU/VDU	FF-01/02	SO2	205.16	31.23	152.03	763	Stack with dual firing (FG:FO=57:43)
		NOx	185.18	17.87	136.22	393	
		CO	9.47	0.10	2.34	172	
		PM	9.21	2.99	4.58	49	
DCU	FF-01	SO2	217.82	54.47	123.86	592	Stack with dual firing (FG:FO=67:33)
		NOx	146.37	0.12	44.58	383	
		CO	40.26	0.00	4.82	166	
		PM	15.16	5.83	7.89	40	
HCU	FF-01/02	SO2	31.07	8.15	15.77	50	Stack with Gas firing
		NOx	115.66	80.65	104.28	350	
		CO	28.19	27.24	27.77	150	
		PM	6.46	4.91	5.68	10	
HCU	FF-03	SO2	36.40	2.00	24.04	150	Stack with dual firing (FG:FO=94:06)
		NOx	49.56	2.32	27.12	356	
		CO	20.59	11.28	11.90	153	
		PM	8.67	6.16	7.16	15	
H2U	FF-01	SO2	46.11	18.28	36.82	50	Stack with Gas firing
		NOx	42.15	18.93	32.74	350	
		CO	8.62	4.80	7.69	150	
		PM	5.17	1.71	3.43	10	
CPP(HRSG)		SO2	19.36	0.58	10.86	50	Stack with Gas firing
		NOx	66.72	5.99	33.11	350	
		CO	13.51	2.27	6.57	150	
		PM	7.17	2.630	4.18	10	

CPP (UB)	SO2	49.91	29.25	41.83	50	Stack with dual firing
	NOx	100.04	0.28	36.49	350	
	CO	6.22	1.86	3.23	150	
	PM	7.00	5.41	6.10	10	
MSP (CRU)	SO2	36.78	1.14	7.28	50	Stack with Gas firing
	NOx	42.80	23.84	37.22	350	
	CO	4.41	0.59	3.08	150	
	PM	6.65	4.01	5.45	10	
MSP (NHTU)	SO2	49.26	1.87	13.86	50	Stack with Gas firing
	NOx	55.97	0.85	32.13	350	
	CO	3.19	0.59	2.43	150	
	PM	6.65	4.01	5.45	10	
DHDT	SO2	11.17	0.00	4.12	50	Stack with Gas firing
	NOx	43.69	0.00	13.65	250	
	CO	4.00	0.000	1.37	100	
	PM	0.78	0.72	0.75	5	
SRU-II	CO	91.93	0.04	31.93	100	Incinerator Stack
CCU	SO2	75.33380556	25.79803037	46.69882293	300	Stack with Gas firing
	NOx	24.77091844	18.89077353	22.37143202	-	
	CO	18.5783921	0.2347196	9.525957308	-	
	PM	28.8169781	20.9176301	22.96824695	150	

Limiting concentration of emission calculated as per MOEF notification on standard vide GSR-186 (E) dated 18th March, 2008.

NUMALIGARH REFINERY LIMITED						
QUARTERLY PERFORMANCE WITH RESPECT TO ENVIRONMENTAL ASPECTS DURING QUARTER II(JULY-SEP'25)2025-26						
Ambient Air Quality Data						
STATION	PARAMETER	STD NAAQS-2009	Unit	OBSERVATIONS		
				MAX	MIN	AVG.
REFINERY (WATCH TOWER NO. 6)	SO2	80 (24 hr avg.)	µg/m3	20.14	12.52	16.38
	NO2	80 (24 hr avg.)	µg/m3	21.43	13.26	17.34
	O3	180 (1 hr avg.)	µg/m3	20.62	11.3	16.44
	CO	4.000 (1 hr.avg.)	mg/m3	0.64	0.50	0.58
	NH3	400 (24 hr.avg.)	µg/m3	28.63	20.12	24.32
	PM 10	100 (24 hr.avg.)	µg/m3	60.00	49.25	55.30
	PM 2.5	60 (24 hr.avg.)	µg/m3	35.58	25.63	29.82
	Benzene	05 (Annual)	µg/m3	0.00	0.00	0.00
	HC	-	mg/m3	0.87	0.51	0.70
	BaP	01 (Annual)	ng/m3	0.00	0.00	0.00
	Pb	1.0 (24 hr.avg.)	µg/m3	0.00	0.00	0.00
	As	06 (Annual)	ng/m3	0.00	0.00	0.00
	Ni	20 (Annual)	ng/m3	0.00	0.00	0.00
ECO-PARK IN NRL TOWNSHIP	SO2	80 (24 hr avg.)	µg/m3	20.64	12.35	16.84
	NO2	80 (24 hr avg.)	µg/m3	21.51	15.22	18.10
	O3	180 (1 hr avg.)	µg/m3	20.78	15.47	17.97
	CO	4.000 (1 hr.avg.)	mg/m3	0.00	0.00	0.00
	NH3	400 (24 hr.avg.)	µg/m3	29.74	22.10	25.65
	PM 10	100 (24 hr.avg.)	µg/m3	61.52	50.12	56.47
	PM 2.5	60 (24 hr.avg.)	µg/m3	32.31	24.53	28.45
	Benzene	05 (Annual)	µg/m3	0.00	0.00	0.00
	HC		mg/m3	0.81	0.57	0.69

NH-39 BYPASS		BaP	1.0 (Annual)	ng/m3	0.00	0.00	0.00
		Pb	1.0 (24 hr.avg.)	µg/m3	0.00	0.00	0.00
		As	6.0 (Annual)	ng/m3	0.00	0.00	0.00
		Ni	20 (Annual)	ng/m3	0.00	0.00	0.00
	RAW WATER INTAKE	SO2	80 (24 hr avg.)	µg/m3	25.88	14.52	19.84
		NO2	80 (24 hr avg.)	µg/m3	21.05	13.85	18.00
		O3	180 (1 hr avg.)	µg/m3	22.61	14.16	18.50
		CO	4.000 (1 hr.avg.)	mg/m3	0.00	0.00	0.00
		NH3	400 (24 hr.avg.)	µg/m3	29.76	20.13	25.04
		PM 10	100 (24 hr.avg.)	µg/m3	60.36	51.66	56.17
		PM 2.5	60 (24 hr.avg.)	µg/m3	58.73	25.76	38.39
		Benzene	05 (Annual)	µg/m3	0.00	0.00	0.00
		HC		mg/m3	0.82	0.57	0.70
		BaP	01 (Annual)	ng/m3	0.00	0.00	0.00
		Pb	1.0 (24 hr.avg.)	µg/m3	0.00	0.00	0.00
		As	06 (Annual)	ng/m3	0.00	0.00	0.00
		Ni	20 (Annual)	ng/m3	0.00	0.00	0.00
	NH-39 BYPASS	SO2	80 (24 hr avg.)	µg/m3	22.58	15.31	18.75
		NO2	80 (24 hr avg.)	µg/m3	21.43	14.96	18.50
		O3	180 (1 hr avg.)	µg/m3	23.35	15.31	18.64
		CO	4.000 (1 hr.avg.)	mg/m3	0.52	0.00	0.17
		NH3	400 (24 hr.avg.)	µg/m3	30.52	22.69	27.08
		PM 10	100 (24 hr.avg.)	µg/m3	63.79	55.42	59.54

KAZIRANGA WILDLIFE SANCTUARY AT AGARTOLI	PM 2.5	60 (24 hr.avg.)	µg/m3	35.46	24.71	30.88
	Benzene	05 (Annual)	µg/m3	0.00	0.00	0.00
	HC	-	mg/m3	0.85	0.57	24.48
	BaP	1	ng/m3	0.00	0.00	0.00
	Pb	1.0 (24 hr.avg.)	µg/m3	0.00	0.00	0.00
	As	6	ng/m3	0.00	0.00	0.00
	Ni	20 (Annual)	ng/m3	0.00	0.00	0.00
	SO2	80 (24 hr avg.)	µg/m3	22.09	14.59	18.30
	NO2	80 (24 hr avg.)	µg/m3	21.79	14.86	18.35
	O3	180 (1 hr avg.)	µg/m3	21.37	15.63	18.56
	CO	4.000 (1 hr.avg.)	mg/m3	0.00	0.00	0.00
	NH3	400 (24 hr.avg.)	µg/m3	29.67	20.57	24.99
	PM 10	100 (24 hr.avg.)	µg/m3	61.78	52.98	57.58
	PM 2.5	60 (24 hr.avg.)	µg/m3	35.86	25.99	29.88

BDL:Below Detection Level, All the parameters are found to be within limit